

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Office Action dated February 4, 2009. Reconsideration and allowance of the application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 1-13 are pending in the Application. Claims 14-17 are added by this amendment.

In the Office Action, claim 13 is rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. This rejection is respectfully traversed. The Office Action indicates that "[a]n example, which would make the subject matter of the instant claim 13 statutory, would be to include a step of displaying a reconstructed image or outputting a material discrimination." (See, Office Action, page 3.) Claim 13 provides the element that the Office Action indicates makes the claim statutory, namely claim 13 recites "outputting the reconstruction volume", clearly producing a tangible, useful result.

Further, the Office Action indicates that claim 13 is drawn to a computer program per se, yet also indicates that "an example that would make the instant claims statutory would be to claim a computer readable medium encoded with a computer program which, when implemented on the data processor, instructs the data processor to perform the desired method steps. Hence, the claims would be directed to statutory subject matter." (See, Office Action, page 3.) Again, claim 13 provides the element that the

Office Action indicates makes the claim statutory, namely claim 13 recites (illustrative emphasis provided) "[c]omputer program stored on a computer readable medium for a data processor for performing a reconstruction of coherent-scatter computed tomography (CSCT) data, wherein the CSCT data comprises a spectrum acquired by means of an energy resolving detector element positioned offset from a primary radiation path, wherein the computer program causes the data processor to perform the following operations ...", clearly statutory subject matter.

Clearly claim 13 recites statutory subject matter. Accordingly, it is respectfully requested that the rejection of claim 13 under 35 U.S.C. §101 be withdrawn.

In the Office Action, claims 1-12 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No. 6,470,067 to Harding ("'067") in view of U.S. Patent No. 4,754,469 to Harding ("'469") and "Filtered Back-Projection Reconstruction Technique for Coherent-Scatter Computed Tomography" by Van Stevendaal et al. (Van Stevendaal), 15 May 2003, Medical Imaging 2003: Image Processing, SPIE Volume 5032, pages 18 10- 18 19). Claim 13 is rejected under 35 U.S.C. §103(a) as allegedly being obvious over '067 in view of '469, Van Stevendaal and U.S. Patent No. 6,529,575 to Hsich ("Hsich"). This rejection of claim 1-13 is respectfully traversed. It is respectfully submitted that claims 1-17 are allowable over '067 in view of '469 and Van Stevendaal alone and in view of Hsich for at least the following reasons.

It is undisputed that '067 and Van Stevendaal show a computer tomography apparatus that utilizes a single type of detector element. '469 is cited to cure that which is missing from each of '067 and Van Stevendaal, however, it is respectfully submitted that reliance on '469 is misplaced.

'469 shows a computer tomography apparatus that like both of '067 and Van Stevendaal, only utilizes a single type of detector element. Specifically, '469 recites "a detector arrangement 5 comprising a number of detectors D0, D1 . . . DN." (See, '469, Col. 3, lines 21-22.) '469 makes clear that "[t]hese detectors may, for instance, be semiconductor detectors, e.g. germanium detectors or scintillation detectors, or possibly thallium-activated sodium iodide detectors." (See, '469, Col. 3, lines 29-32.) Accordingly, '469 makes clear that a single type of detector may be utilized, albeit, one type is shown to be a scintillation detector.

It is respectfully submitted that none of '067, '469 and Van Stevendaal show a detector element that utilize a detector made up of both of an energy resolving detector element positioned offset from a primary radiation path and a scintillator detector element positioned along the primary radiation path.

Accordingly, it is respectfully submitted that the device of claim 1 is not anticipated or made obvious by the teachings of '067 in view of '469 and Van Stevendaal. For example, '067 in view of '469 and Van Stevendaal does not teach, disclose or suggest, a

device that amongst other patentable elements, comprises (illustrative emphasis added) "a detector comprising both an energy resolving detector element positioned offset from a primary radiation path and a scintillator detector element positioned along the primary radiation path, wherein the energy resolving detector element is configured to acquire a spectrum, and wherein both the energy resolving detector element and the scintillator detector element are formed on the detector; a memory for storing the CSCT data; and a data processor for performing a filtered back-projection, wherein the data processor is adapted to perform the following operations: determining a wave-vector transfer by using the spectrum; determining a reconstruction volume using the wave-vector transfer and data from the scintillator detector element, wherein a dimension of the reconstruction volume is determined by the wave-vector transfer, wherein the wave vector transfer represents curved lines in the reconstruction volume; and performing a filtered back-projection along the curved lines in the reconstruction volume" as recited in claim 1, and as similarly recited in each of claims 5, 8 and 13.

In addition, since Hsich is introduced for allegedly showing another element of the claims, Hsich does nothing to cure the deficiencies in '067, '469 and Van Stevendaal.

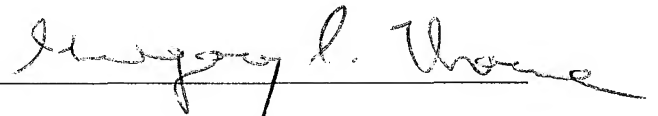
Based on the foregoing, the Applicants respectfully submit that independent claims 1, 5, 8 and 13 are patentable over '067, '469 and Van Stevendaal and notice to this effect is earnestly

solicited. Claims 2-4, 6-7 and 9-17 respectively depend from one of claims 1, 5, 8 and 13 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

By. 

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